



BUTTERFLY CONSERVATION INITIATIVE

The Year of Education 2005 Annual Report

Our mission: *The Butterfly Conservation Initiative is dedicated to the conservation of threatened, endangered, and vulnerable North American butterflies and the habitats that sustain them, with a focus on recovery, research and public education.*

2005 in Review

What a year! As a result of BFCI and its members' and partners' efforts, there is more butterfly habitat, more captive rearing programs for endangered and vulnerable butterflies, more monitoring of vulnerable species, and perhaps most importantly, more people are aware of the many threats facing butterflies, how they can get involved, and what local organizations are doing to address this challenge. While expanding its recovery and research efforts, BFCI made exceptional advances in its outreach and education efforts. There are now many more resources available to members, partners, and the public about butterflies, their conservation needs, and how educators can more effectively communicate these messages.

In March 2005, BFCI closed out its two-year Ohio butterfly habitat restoration and education project. The George Gund Foundation provided funding for this collaborative project that capitalized on the strengths of the BFCI, *the Wilds*, the Columbus Zoo and Aquarium, Cleveland Metroparks Zoo, Cincinnati Zoo and Botanical Garden, the Toledo Zoo, and Akron Zoo. Gund-supported habitat restoration at *the Wilds* was completed by the end of the 2004 growing season and a traveling exhibit, signage about Ohio butterflies, reports of survey results, and a Butterfly Festival Manual were completed in early 2005. This project demonstrated the fundraising potential of collaborations and the education and outreach value of projects that complement one another. We thank all of the participants for their dedication to this project and look forward to continued monitoring and habitat restoration at *the Wilds* and continued outreach efforts at all participating facilities. In particular, we thank the George Gund Foundation for supporting this local project.

Four more AZA-accredited facilities joined the BFCI in 2005: the Naples Zoo, Brevard Zoo, Museum of Science, and Birmingham Zoo. The Naples Zoo has certified Backyard Habitat on-grounds, while the Museum of Science offers a year-round butterfly exhibit. The Brevard Zoo and Birmingham Zoo each host temporary butterfly exhibits. We are very pleased to welcome these institutions to the BFCI and look forward to working with them. We also launched a membership renewal campaign this year, as the large majority of our members were completing their original three-year pledge commitments. The BFCI is grateful to all 42 of our founding members for their leadership and is especially pleased that so many



are continuing to provide financial support to the Initiative. We currently count 54 AZA-accredited zoos and aquariums among our active membership. Seventy-six percent of our members responded to BFCI's second annual member survey and from this survey we found that for over 95% of survey respondents, BFCI has met their expectations. We attribute continued participation in the Initiative to this high level of satisfaction and look forward to increasing that percentage even more in coming years.

BFCI also gained its seventh partner organization in May of this year, the North American Pollinator Protection Campaign (NAPPC). NAPPC comprises

voluntary partners representing government agencies, non-government organizations, environmental groups, garden groups, landowners, scientists, farmers, businesses, and private individuals, each concerned with some aspect of pollinator conservation and/or pollination ecology. Among others, NAPPC's partners include: US Fish & Wildlife Service, National Park Service, US Department of Agriculture, US Geological Survey, Wildlife Habitat Council, Xerces Society, National Wildlife Federation, National Gardening Association, Defenders of Wildlife, and The Nature Conservancy. Among its projects, NAPPC recently spearheaded a proposal to the National Academy of Sciences National Research Council for a study of the "Status of North American Pollinators" and is leading a letter-writing campaign to the US Postal Service promoting a pollinator stamp series aimed at raising pollinator awareness among the general public.

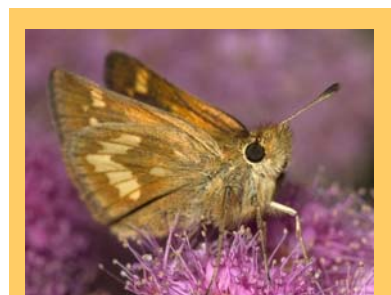
Important steps were taken at BFCI's administrative level in 2005. The Initiative's first elected steering committee replaced the interim steering committee in March. The steering committee held its first annual meeting at AZA's Annual Conference in September 2005, where much was accomplished in terms of identifying future fundraising possibilities and facilitating BFCI's upcoming transition away from AZA. After establishing the Initiative, supporting it in numerous ways, and hosting it for almost three years, AZA has asked BFCI to encourage another of its members or partners to host the program in order to make way for changes at AZA. The BFCI steering committee led the review of proposals from potential host institutions and has worked with steering committee co-chair Ruth Allard and program coordinator Shelly Grow to ensure a smooth transition.

We are pleased to announce that the new host will be the Missouri Botanical Garden in St. Louis, MO, parent facility of AZA-member the Butterfly House. We know that the strong relationship with AZA and its (and our!) members will continue without a hitch and are eager to explore the opportunities that arise from being located at one of the oldest and most respected Botanical Gardens in the US. Our mission is fundamentally tied to plant and habitat conservation and we look forward to expanding our partnerships with local and national gardens. We expect the physical move to take place in early 2006 and will keep BFCI members posted on this exciting change.

With all this activity and the continued growth of the Initiative, BFCI can proudly say that we made a difference for North American butterflies this year. And we are poised to have a growing impact well into the future. Thank you for all of your efforts, for sharing your knowledge and experiences with your peers, and for your continued commitment to the Butterfly Conservation Initiative.

Recovery Progress

The primary goal of BFCI is to support the recovery of endangered, threatened and vulnerable butterflies in North America. BFCI's members and partners pursue this overarching goal by identifying and acting on the conservation needs facing these butterflies.



Credit: Michael Durham. Mardon skipper.

This year, we saw increased involvement in certified habitat programs, habitat assessments, and species searches. Ten of our members have National Wildlife Federation (NWF)-certified Backyard Habitat on-grounds, while two of our members have wildlife habitat that had been certified through state programs. Monarch Watch unveiled its Monarch Waystation program, a plan to develop monarch habitats throughout the butterfly's migration corridors, and many of our members expressed interest in becoming certified. The Central Florida Zoo has already completed the certification process. We have also seen a number of members involved in habitat assessments. The Toledo Zoo monitors habitat for the purplish copper (*Lycaena helloides*), endangered Mitchell's satyr (*Neonympha mitchellii*), and the swamp

metalmark (*Calephelis muticum*), while the Detroit Zoo is helping assess a game preserve to determine its potential as future habitat for the endangered Karner blue butterfly (*Lycaeides melissa samuelis*). The Oregon Zoo is supporting habitat assessments and searches for the Island marble butterfly (*Euchloe ausonides insulana*), a butterfly seen for the first time in 1997 after a 90-year absence. Searches by BFCI partner the Xerces Society helped discover a few small populations of the Island marble butterfly on the San Juan Islands in Washington, as well as the third-largest known population of the Taylor's checkerspot (*Euphydryas editha taylori*) in Washington and a few small populations of the Mardon skipper (*Polites mardon*) in Oregon. Both the Taylor's checkerspot and Mardon skipper are federally listed as candidate species under the Endangered Species Act (ESA).

A ten-acre butterfly habitat creation project was completed in December 2004 at *the Wilds* in southeastern Ohio. A two-year grant from the George Gund Foundation supported this effort as well as education and outreach projects at five other Ohio zoos (Columbus Zoo and Aquarium, Cleveland Metroparks Zoo, Cincinnati Zoo and Botanical Garden, the Toledo Zoo, and Akron Zoo). The physical recovery of the land was complemented by the educational programs at partnering zoos, as well as directly through the labor, seed collection, and support provided by partner zoo staff. Educational programming at the participating zoos included the development of a Butterfly Festival Manual, three bug and butterfly festivals, educational signage, and a traveling exhibit.



Credit: Ian Adams/*the Wilds*

Butterfly recovery and conservation was a consistent presence at the national policy level. As reported in *BFCI News*, the proposal to list the Sacramento Mountains butterfly (*Euphydryas anicia cloudcrofti*), found in New Mexico, was withdrawn in December 2004, based on the conclusion that threats facing the species, as identified in the proposed rule, are not as significant as previously believed. The Miami blue butterfly (*Hemiargus [Cyclargus] thomasi bethunebakeri*) was listed as a Candidate species under the ESA in May 2005. The McGuire Center for Lepidoptera and Biodiversity has been working with this species for over two years and is currently rearing it in captivity and augmenting wild populations. Also in May, members of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) designated the Ottoo skipper (*Hesperia ottoe*) as endangered. In August, the recovery plan for Blackburn's sphinx moth (*Manduca blackburni*) was approved. Critical habitat was proposed for the endangered Fender's blue butterfly (*Euphydryas anicia cloudcrofti*) in November, with public comment being accepted until 3 January 2006. In December, critical habitat was proposed for the endangered Laguna Mountains skipper (*Pyrgus ruralis lagunae*) and public comment will be accepted until 13 February 2006.

Research Advances

BFCI members and partners have vast experience in population monitoring, captive propagation of imperiled butterfly and host plant species, habitat restoration, and species reintroductions. Given that a lack of information about species' life histories, distributions, and population requirements has inhibited the development of recovery plans for some species and complicated recovery efforts for others, BFCI members and partners dedicate their expertise to closing some of the information gaps currently frustrating the development and implementation of solid recovery plans.

One of the exciting collaborative research projects BFCI members and partners began this year was the Florida Butterfly Monitoring Network, led by the McGuire Center for Lepidoptera and Biodiversity and Disney's Animal Kingdom with funding from AZA's Conservation Endowment Fund (CEF). The Network has gotten a second year of funding from the Florida Fish and Wildlife Conservation Commission and now the Central Florida Zoo, Brevard Zoo, Miami Metrozoo/Zoological Society of Florida, and the Lowry Park Zoo are all participating in the program.

Both the number of BFCI facilities with captive propagation programs and the number of species involved grew in 2005. After years of growing the Karner blue butterfly's host plant, Roger Williams Park Zoo began rearing Karner larvae through the pupation stage this year. The pupae were then brought



Credit: Peter Tolson. Swamp metalmark.

to the New Hampshire Department of Fish and Game where the emerging butterflies were used for breeding purposes and then released. The Toledo Zoo has gone from solely raising the Karner blue butterfly to also rearing the Mitchell's satyr, the purplish copper, and the swamp metalmark. The Oregon Zoo, Oregon Coast Aquarium, and Woodland Park Zoo continue to rear the threatened Oregon silverspot (*Speyeria zerene hippolyta*) in captivity, and the Oregon Zoo has also begun rearing the Puget blue (*Icaricia icarioides blackmorei*) to learn about differences between captive and wild-raised butterflies. The Oregon Zoo is also partnering with the Washington Department of Fish and Wildlife to raise the Taylor's checkerspot and Mardon skipper.

This summer, the Xerces Society completed an updated and expanded version of the Species Profiles and Needs Assessments. This new version, the Red List of Pollinator Insects, includes the conservation needs and priorities of ESA-listed and vulnerable species throughout the US and federally listed species in Canada. The profiles can be accessed from the Xerces Society's Web site (www.xerces.org) and will be updated again in January 2006.

Education Efforts

Against the backdrop of new and expanding recovery and research endeavors, BFCI dedicated 2005 to advancing its education goals and objectives. Almost 75% of member survey respondents had ongoing butterfly education and outreach projects in 2005, well above the 28% with recovery and 33% with research projects. As a result, it was appropriate for BFCI to dedicate 2005 to the "Year of Education."

Year of Education accomplishments include:

- The new BFCI Web site (www.butterflyrecovery.org) was made possible by donations from a wishing well placed at the Butterfly House in St. Louis, MO. All donations from this well are directed to the BFCI, and the 2005 contribution was used to support the development of BFCI's Web site.
- Surveys were conducted to assess the public's knowledge, opinions, and attitudes about North American butterflies. Insights gained from these surveys will assist zoos and aquariums further target their conservation messages.
 - The Toledo Zoo surveyed public attitudes and knowledge about butterflies. A professor at the University of Toledo developed the survey and did the analysis. A publication of their results will include the survey questions used so that other facilities can survey their guests in a similar fashion.
 - The Brookfield Zoo conducted a survey on how exhibit experiences impact how much visitors care about butterflies. Zoo staff talked with visitors before and after they went through a butterfly exhibit to understand the visitors' caring. The study was published in the proceedings from this year's Invertebrates in Captivity Conference.
 - The Brookfield Zoo, with support from the collaborative George Gund Foundation grant, coordinated surveys at bug and butterfly festivals at Ohio zoos to identify which messages guests remembered and what they found most interesting at the festivals. That report is available on the BFCI Web site and includes the survey questions used.



- The Xerces Society’s Red List of Pollinator Insects (www.xerces.org) will be of particular use to educators framing their butterfly conservation messages around locally vulnerable species.
- The Toledo Zoo developed a Butterfly Festival Manual with funds from the George Gund Foundation. This manual includes checklists to help people plan their events, ideas for getting local organizations to support festivals, and links to activities and other resources.
- BFCI co-hosted the Successful Butterfly Education and Outreach session at AZA’s Regional Workshop in Kansas City, MO. The proceedings, including photos and descriptions of educational materials shared can be found on the BFCI Web site.



Outreach about the Initiative and the work of its members got a boost with the establishment of a bi-monthly newsletter, *BFCINews*. This publication is distributed over the BFCI listserv (over 240 subscribers), to the directors of BFCI members, over the NAPPC listserv, at conferences, and in promotional materials. *BFCINews* featured stories about the expanding captive propagation program at the Oregon Zoo, the migration of painted ladies as described by staff at the Living Desert, the searches and advocacy work on behalf of the Mardon skipper, Taylor’s checkerspot and Island marble undertaken by the Xerces Society, and the research, recovery, and education efforts being done at the Houston Zoo. We look forward to continuing to highlight BFCI members’ and partners’ activities in future issues of *BFCINews*.



Financials

BFCI’s fundraising efforts, outside of membership solicitations, were on hold in FY05 as a result of policies at BFCI’s host organization. These restrictions have been lifted for FY06 and fundraising will become an important focus over the next year. We welcome our new members and thank existing members for their continuing support and helping us make a collective impact on butterfly populations.

Statement of Activities *BFCI’s fiscal year runs from October 1 to September 30*

		2005	2004
Operations			
Revenue	Membership	\$43,800	\$45,500
	Grants	\$0	\$20,000
	Donations - Organizations/Individuals	\$225	\$3,442
	Pins	\$110	\$140
	TOTAL REVENUE	\$44,135	\$69,082
Expenses	Ohio Habitat Restoration and Outreach	\$4,863	\$18,594
	Education and Outreach	\$2,849	\$0
	Initiative Costs	\$64,781	\$48,887
	TOTAL EXPENSE	\$72,493	\$67,481
Current Year Operating Balance		-\$28,358	\$1,601
Cash on Hand at Beginning of Fiscal Year		\$81,596	\$80,995
Cash on Hand at End of Fiscal Year		\$53,238	\$81,596

Steering Committee

In Spring 2005, BFCI held elections for positions on the first elected steering committee. Since 2001, an interim steering committee has served and led the BFCI and we thank all of those members for their dedication and vision during BFCI's formation and initial growth. Elections were open to all members, contributors, and partners and we were fortunate to have a very committed and competent group step up to the plate.

All position terms will be three years, although in both January of 2007 and January 2008 three people's spots will be up for election to ensure staggered terms into the future.

Ruth Allard (*Co-chair*)

Interim Assistant Director, Conservation & Science
American Zoo and Aquarium Association

Dale Belcher

Curator of Herpetology and Invertebrates
Albuquerque Biological Park

Dr. Nicole Cavender

Restoration Ecologist
the Wilds/ Columbus Zoo and Aquarium

Dr. Jaret Daniels (*Vice-chair*)

Assistant Director for Research
McGuire Center for Lepidoptera and Biodiversity, University of Florida

Mark Deering (*Co-chair*)

Collections Manager and Curator of Butterflies
The Butterfly House

Norah Fletchall

Assistant Zoo Director
John Ball Zoological Garden

David Harrelson (*advisor*)

Office of Partnerships and Outreach
USFWS Division of Endangered Species

Laura Harris

Head Keeper-Butterflies
Detroit Zoological Institute

Dr. Michael Hutchins (*advisor*)

Executive Director
The Wildlife Society

Mitch Magdich

Curator of Education
The Toledo Zoo

Dr. Jonathan Mawdsley (*advisor*)

Program Manager
National Fish and Wildlife Foundation

Craig Tufts

Chief Naturalist
Director of Citizen Science Programs
National Wildlife Federation

Dr. Wayne Wehling (*advisor*)

Entomologist
USDA - APHIS



Credit: Ruth Allard. BFCI members and instructors at the butterfly conservation techniques course.

Contributing Organizations

(** Founding member; * Member)

- ** Abilene Zoo
- ** Akron Zoological Park
- ** Albuquerque Biological Park
- ** Audubon Nature Institute
- ** Binder Park Zoo
- * Birmingham Zoo
- Brandywine Zoo
- Brevard Zoo
- * Brookfield Zoo
- ** Bronx Zoo/WCS
- * The Butterfly House
- ** Calgary Zoo, Botanical Garden and Prehistoric Park
- ** Central Florida Zoological Park
- ** Chaffee Zoological Gardens
- * Chesapeake Chapter of the American Association of Zoo Keepers – Salisbury Zoo
- ** Cheyenne Mountain Zoo
- ** Cincinnati Zoo & Botanical Garden
- ** Cleveland Metroparks Zoo
- ** Columbus Zoo and Aquarium
- * Como Park Zoo and Conservatory
- ** Connecticut's Beardsley Zoological Gardens
- ** The Dallas World Aquarium
- ** Detroit Zoological Institute
- ** Disney's Animal Kingdom
- ** Friends of the WNC Nature Center
- ** Fort Wayne Children's Zoo
- ** Henry Vilas Zoo
- * Houston Zoo
- ** John Ball Park Zoological Garden
- ** The Living Desert
- ** Louisville Zoological Garden
- ** Lowry Park Zoo Eco-Conservation Committee
- ** The Maryland Zoo in Baltimore
- * Museum of Science
- * Naples Zoo
- ** National Aquarium in Baltimore
- ** The Oakland Zoo
- ** Oklahoma City Zoo & Botanical Garden
- Oregon Coast Aquarium
- ** Oregon Zoo
- ** Potawatomi Zoo
- ** Reid Park Zoo – Teen Volunteers
- ** Racine Zoological Gardens
- ** Roger Williams Park Zoo
- ** San Antonio Zoological Gardens and Aquarium
- * San Diego Zoo's Wild Animal Park
- ** Santa Barbara Zoological Gardens
- ** Seneca Park Zoo
- Steinhart Aquarium
- ** The Toledo Zoo
- ** Toronto Zoo
- * Utah's Hogle Zoo
- ** Vancouver Aquarium
- ** Woodland Park Zoo

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